PHILADELPHIA STEAM HEATING COMPANY

United States Treasury Department, Washington, D. C.

INQUIRIES solicited for complete Central Heating Plants, Steam, Vacuum, Exhaust and Fan Heating, Ventilating, Drying Apparatus, etc. Blower systems of Heating and Ventilating, Air Washers, Air Filters, and Humidifiers, Power Equipment and Auxiliary Machinery, Piping for High Pressures, Gas Producers, etc. Steam and Hydraulic Fitting, Sheet Metal Work, Boilers, Tanks, Boiler Repairs and Tubing, Fire Service and Water Supply and Filtering Systems, Automatic Temperature Control for any purpose. Insulation, Pipe Covering, etc.

REPAIR AND RECONSTRUCTION WORK.

CASTINGS AND REPAIR PARTS for Heating Apparatus of all kinds carried in warehouse stock, insuring immediate fulfillment of repair orders.

EXHAUST STEAM UTILIZATION by means of the Keystone System of Exhaust Steam Circulation, for Heating and Drying. Applicable to Store and Office Buildings, Hotels, Mills, Factories, etc., or any building equipped with steam power in which waste exhaust steam may be utilized.

ESTIMATED COSTS
PLANS

SPECIFICATIONS
EXPERT REPORTS

UNITED STATES TREASURY DEPARTMENT, WASHINGTON, D. C.

INQUIRIES solicited for complete Central Heating Plants, Steam, Vacuum, Exhaust and Fan Heating, Ventilating, Drying Apparatus, etc. Blower systems of Heating and Ventilating, Air Washers, Air Filters, and Humidifiers, Power Equipment and Auxiliary Machinery, Piping for High Pressures, Gas Producers, etc. Steam and Hydraulic Fitting, Sheet Metal Work, Boilers, Tanks, Boiler Repairs and Tubing, Fire Service and Water Supply and Filtering Systems, Automatic Temperature Control for any purpose. Insulation, Pipe Covering, etc.

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ESTIMATED COSTS
PLANS

SPECIFICATIONS
EXPERT REPORTS

THE PHILADELPHIA MUSEUMS, PHILADELPHIA.
Messrs. Brockie & Hastings, Architects.

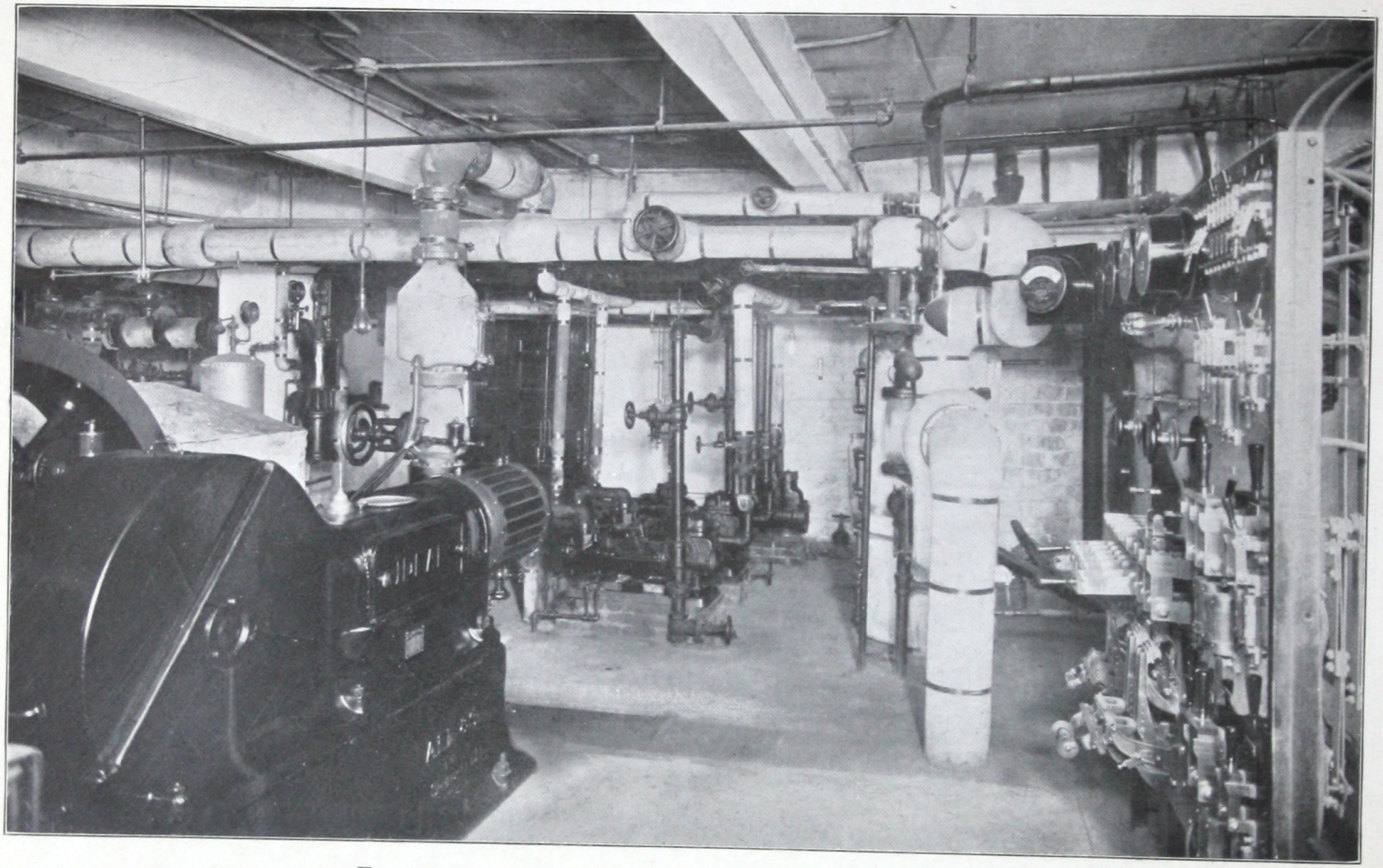
JOBBERS AND DEALERS IN POWER PLANT EQUIPMENT

BOILERS, Fire and Water Tube Types.
PUMPING MACHINERY, Boiler Feed, Tank, Vacuum,
Well, and for all duties.
FEED WATER HEATERS, Closed and Open Types.
INDUCED DRAFT BLOWERS, Fuel Economizers.
TANKS, Plate Steel, black and galvanized—Copper.

STEAM SPECIALTIES OF ALL TYPES

Thermostatic and Float Steam Traps,
Back Pressure Valves,
Automatic Pressure Reducing Valves,
Injectors, Ejectors, Damper Regulators,
Temperature Regulators, Separators, Oil Extractors,
Steam Separators, Automatic Water Feeds, Gauges,
Steam Jacket Kettles, Exhaust Heads.

PIPE, FITTINGS, VALVES, PACKINGS, AND A COMPLETE LINE OF SUPPLIES, FOR STEAM, WATER, AIR AND GAS



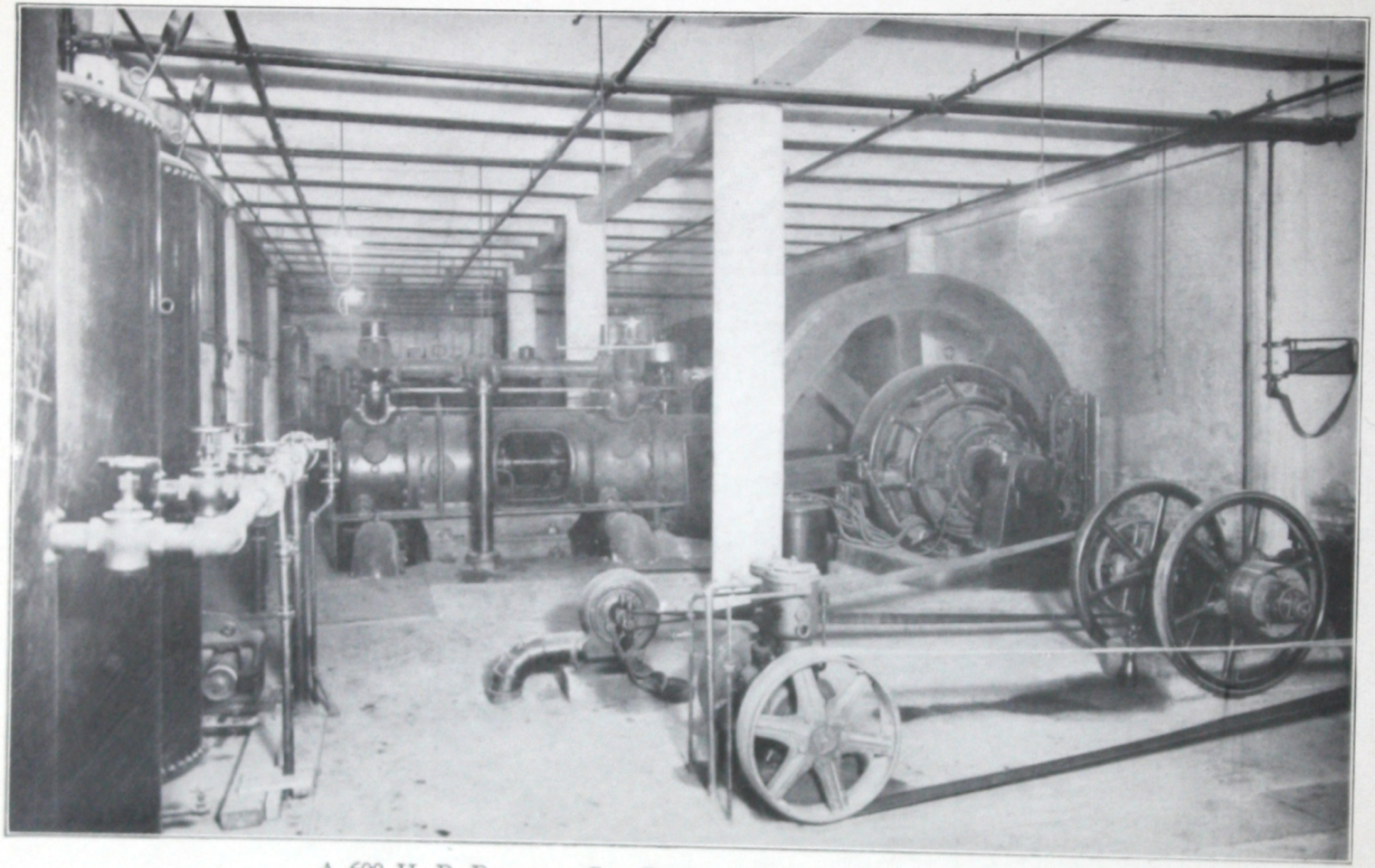
Engine Room, Peoples Trust Company, Philadelphia.

POWER PLANT EQUIPMENT

THE ever-increasing demand for economical power has effected great forward strides in the engineering features connected with the construction of the Modern Power Plant.

High pressure is one of the most economical factors in the generation of steam for power, which requires that great care must be exercised in plant construction. The boilers, engines, pumping machinery and other apparatus must be set and piped with the utmost exactitude. The equipment must be selected and arranged with a view to furnishing the maximum power at the minimum cost of operation. The great strains must be provided for, and the safety of the plant constantly maintained. All this requires a combination of engineering, manufacturing and constructive skill of the highest order.

Our Power Construction Department is keeping pace with the latest improvements. We erect the complete plant, piped and left in operation for any desired pressure or duty.



A 600 H. P. Producer Gas Plant in the Gilbert Building.
The largest in Philadelphia.

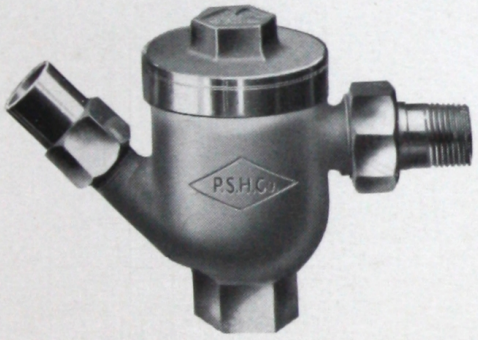
POWER PLANT OPERATING ECONOMIES may be effected in various ways. The pre-heating and purifying of the boiler feed water, the profitable use of exhaust steam, the utilization of hot condensation as feed water, are some of the more important points that must be covered in designing and erecting the plant. Considering that only a very small percentage of the original heat energy is used by the engines, it follows that nearly all of the first value remains in the exhaust steam. This may be utilized in various ways—heating the buildings in the Winter; heating the feed water for the boilers; and for a multitude of other purposes for which steam is needed in almost every building.

Our Power Plant Department has made a study of all the intricacies of this branch, and each installation is treated individually, bearing in mind its peculiar requirements.

PEOPLES TRUST COMPANY, PHILADELPHIA.
Messrs. Sauer & Hahn, Architects.

THE "KEYSTONE" AUTOMATIC WATER AND AIR RELIEF VALVE

(Patented)



THIS valve may be applied to Vapor-Atmospheric-Modulation Systems, but it is especially adapted for use in connection with vacuum systems for large plants where exhaust steam is circulated by means of vacuum return lines. The application of the automatic return valve for this type of system is so well known as not to require any further explanation. The "Keystone" is unqualifiedly the best valve for this purpose on the market to-day. It entirely, automatically and effectually permits the removal of air and condensation from the system without waste of steam. It is also provided with a by-pass, controlled by means of a key. This feature, found in no other valve, is a most important adjunct in the event of temporary stoppage of the automatic ports. This valve has proved to be a great steam saver, and is now successfully used on over two million feet of radiating surface.

THE FIRE ASSOCIATION OF PHILADELPHIA,
FOURTH AND WALNUT STREETS.
Edgar V. Seeler, Architect.

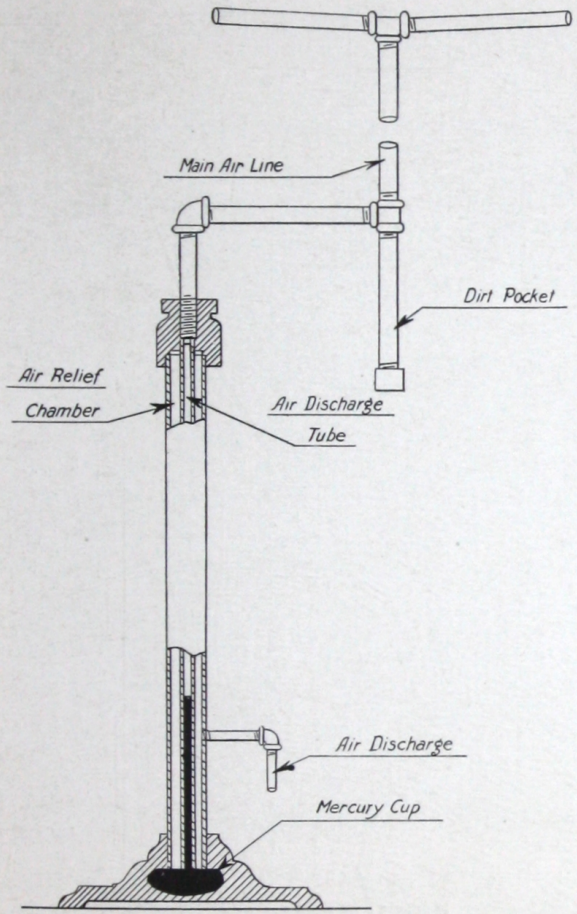
FOR over forty years we have been manufacturers of and constructing engineers for the installation of Heating Apparatus; and in the course of that time we have evolved many ideas in Heating Specialties.

Heating Specialties of to-day are generally made by purely Manufacturing Companies who market them only through the intermediary of Steam Heating Concerns. As a rule, this is where the manufacturer's responsibility entirely ceases, and the natural consequence is, that the owner of the building is often left to get rid of the burden of a defective apparatus or to worry along with it the best he can.

We manufacture heating goods FOR USE IN OUR OWN BUSINESS AS CONSTRUCTORS OF THE COMPLETE PLANT and the guarantee we give as such to the purchaser, covering the features of economy in operation, efficiency, durability, ease of management etc., are not based upon someone's else "promises," but upon our actual experience with goods we manufacture and thoroughly know.

THE CENTRAL TRUST & SAVINGS COMPANY, FOURTH AND MARKET STREETS, PHILADELPHIA.
Mr. William Copeland Furber, Architect.

THE PARKWAY BUILDING, PHILADELPHIA.
Messrs. Hazlehurst & Huckel, Architects.



TRANE MERCURY SEAL

THE TRANE MERCURY SEAL VACUUM SYSTEM

(Patented)

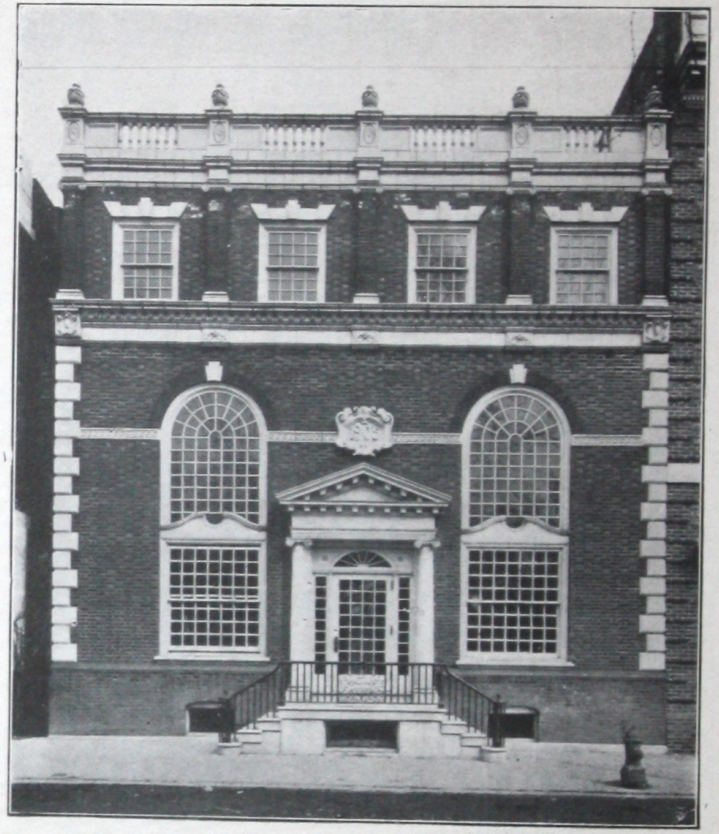
THIS little device, not much larger than a broom handle, is the most powerfully acting heating attachment ever put on the market. By the simple trapping of the air vent with a seal of mercury, a small volume of steam or vapor is immensely multiplied when expanded under vacuum. Herein is the secret of the wonderful success of the TRANE VACUUM SYSTEM. In other words, a peck of heating fluid may be expanded into a bushel. Thus the vapor or steam required to heat the surface of one radiator, by the use of the mercury seal, may be made to heat many radiators, *and, remember this does not require the expenditure of one additional cent in cost of operation.*

It may be applied to any vapor or steam heating plant, old or new, and is generally placed in the cellar near the heater.

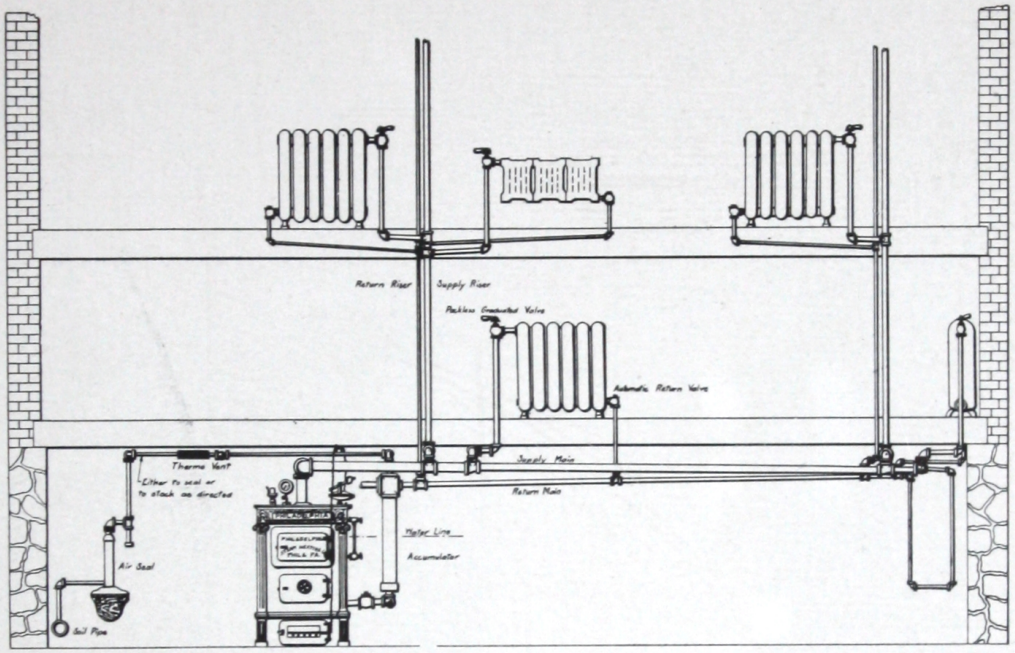
There are many so-called devices for maintaining a vacuum, such as the vacuum air valve, ordinary check valves, often masked under high-sounding names, but there is only ONE Mercury Seal Vacuum System, and that is the "Trane." There are no pumps, check valves, traps, receiving tanks, cog-wheels, springs, or other clap-traps. Just a seal of mercury that cannot congeal or evaporate, requires no attention, and is indestructible.

PRICES FOR APPLICATION TO OLD PLANTS, OR FOR NEW INSTALLATIONS, SUBMITTED UPON REQUEST

BANKING HOUSE OF E. W. CLARK & COMPANY, PHILADELPHIA.
Mr. Theopilus P. Chandler, Architect.



A COLONIAL BUILDING IN EAST INDEPENDENCE SQUARE, PHILADELPHIA.
Mr. George T. Pearson, Architect.



TYPICAL SKETCH

A GRADUATED SYSTEM OF VAPOR HEATING.

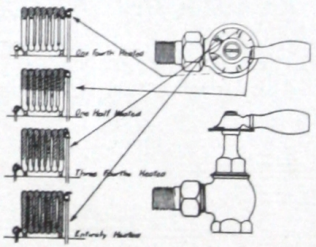
Circulating Vapor, either under vacuum or atmospheric pressure, combines the merits of the apparatus sometimes called Vapor Vacuum Atmospheric or Modulation Systems. It eliminates the disadvantages peculiar to the individual type.

A packless-graduated valve is used at top or bottom of radiator, as desired, permitting the heating of all or any fractional part.

It is the only system which can be operated under a positive vacuum and has a range of temperature in the radiators from 120° to 250° Fahr. or 60° more than any other in use.

It is economical in operation and requires the minimum amount of attention.

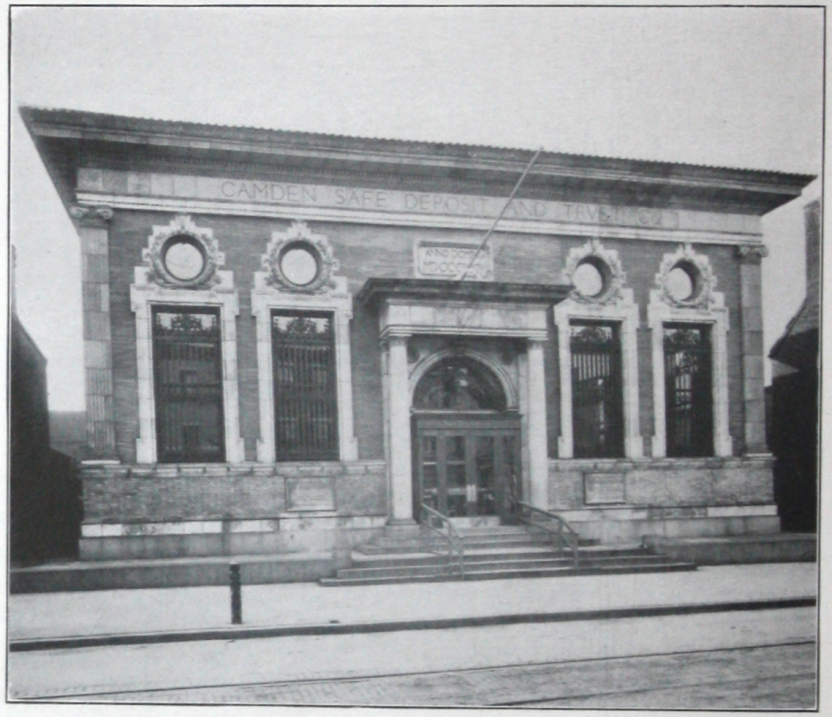
Holds heat in the radiators, day and night.



Sketch of Graduate Valve also showing Control of Heat in Radiators.

THE PHILADELPHIA STEAM HEATING CO
ENGINEERS
1313-1319 CHERRY STREET
PHILADELPHIA, PA.

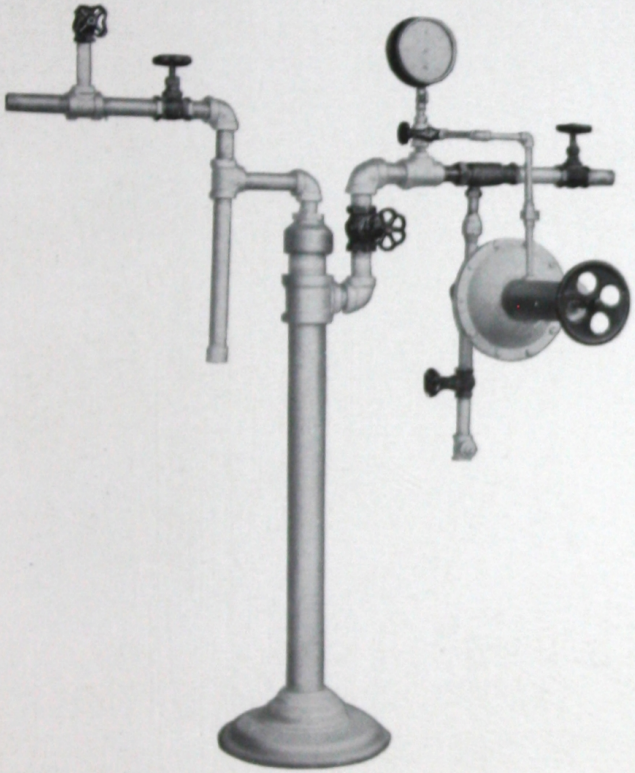
THE COMMERCIAL TRUST COMPANY,
PHILADELPHIA.
Messrs. Furness, Evans & Company, Architects.



THE CAMDEN SAFE DEPOSIT & TRUST COMPANY, CAMDEN,
NEW JERSEY.
Mr. James Russell Harris, Architect.

THE "PHILADELPHIA" SYSTEM OF VACUUM HEATING

APPLICABLE TO LARGE BUILDINGS—PATENT APPLIED FOR



THIS system is designed to meet the growing demand for an apparatus that will quickly remove the air from a heating system having a large amount of surface, and yet be capable of maintaining vacuum in the apparatus without continual application of the motive force.

The Air Extractor may be operated by water, electricity, compressed air or steam power, whichever is available. It is attached to the main air line, and the air is quickly extracted from the apparatus, creating a vacuum, which automatically stops the operation of the Air Extractor. Vacuum is maintained by a Mercury Seal, which is used in combination with Extractor. This obviates the high cost of operation required by Vacuum Pumps and similar devices previously used.

Heat may be circulated through the radiators in a few minutes after the morning cleaning of the fire, instead of firing the heater hard for several hours to expel air by pressure. This means a big saving in fuel, time and patience.

APPLICABLE TO NEW OR OLD STEAM OR VAPOR SYSTEMS. COMPLETE DATA AND ESTIMATES UPON APPLICATION.

THE FIRST "SKY-SCRAPER" IN PHILADELPHIA. ERECTED BY THE LATE DR. DAVID JAYNE IN 1850, CHESTNUT AND THIRD STREETS.

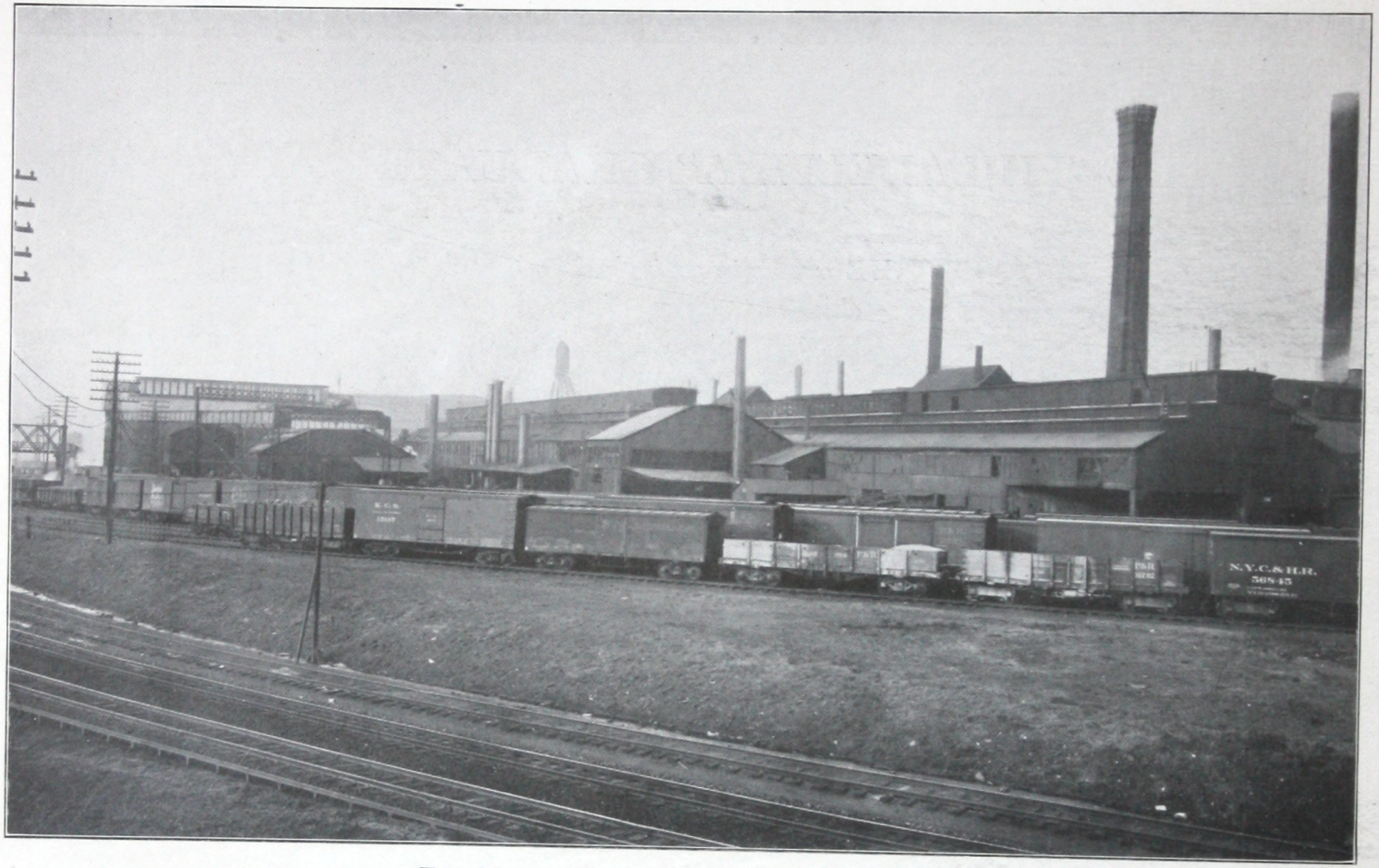
THE "PHILADELPHIA" GRADUATE VALVE

THE graduate control of each radiator, while not essential, is most desirable, as there are times when only part of the radiator filled with the heating fluid will be sufficient to comfortably warm the room. This can be accomplished by use of the graduate or fractional type of radiator valve, but the difficulty has been to obtain a valve which wouldn't leak or bind in operation.

Our graduate valve is packless, tight, easy of operation, continually and absolutely accurate in its graduating feature. The ports of the valve are scaled in size to suit the surface in the radiator—a feature not obtainable in any other valve.

MADE IN ALL SIZES AND APPLICABLE TO VACUUM, STEAM, VAPOR, OR WATER INSTALLATIONS.

This valve, while adding slightly to the first cost of the apparatus, is a distinct advantage in that it controls the amount of heat in the radiator to just what is required, and prevents consequent waste of fuel, and loss of heat.



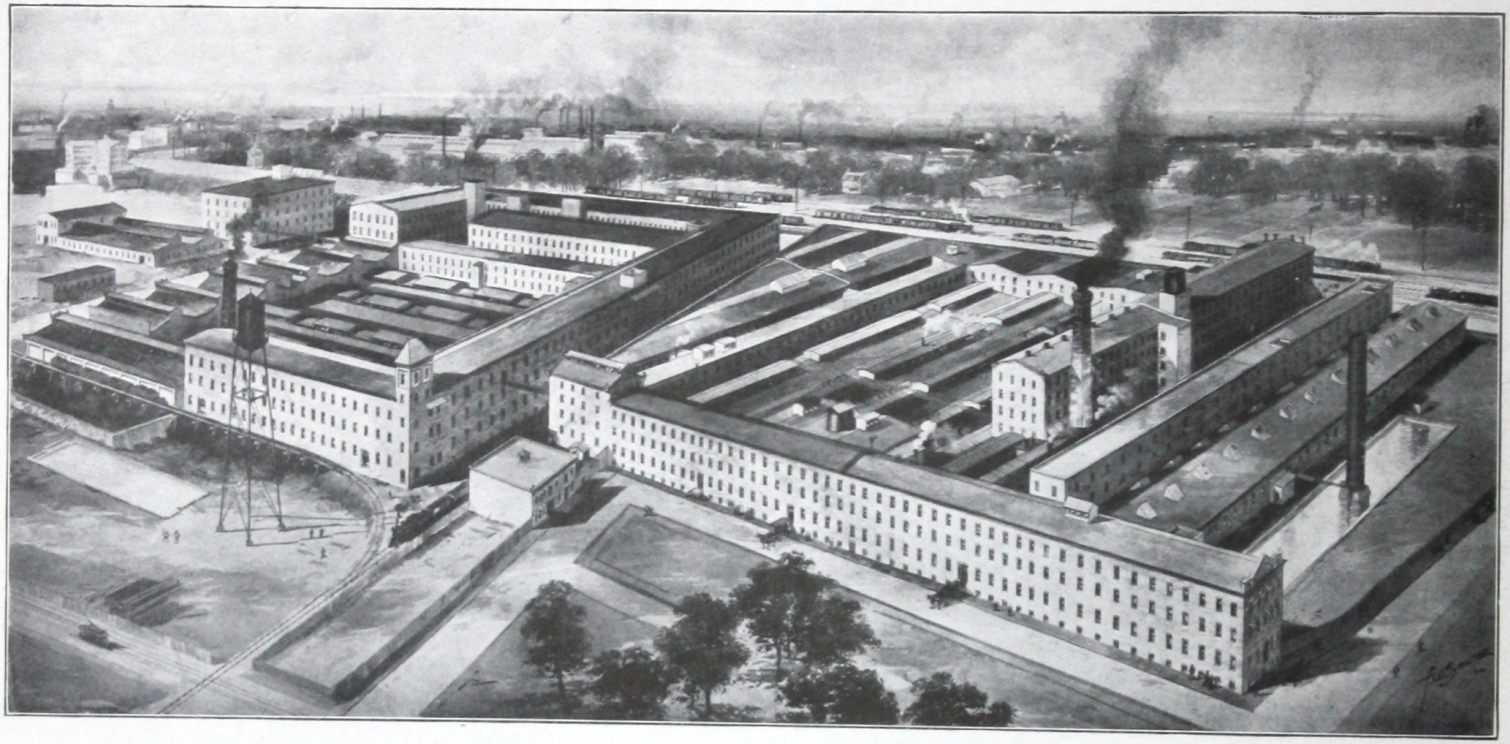
THE MIDVALE STEEL COMPANY, PHILADELPHIA.

THE "PHILADELPHIA" PACKLESS RADIATOR VALVE

HAVE you ever experienced the annoyance due to the ordinary radiator valve leaking over the floors and down through the ceilings, or have you ever had a bill from a steam fitter for fixing them? We have repacked thousands of them, but the packing *will* wear out.

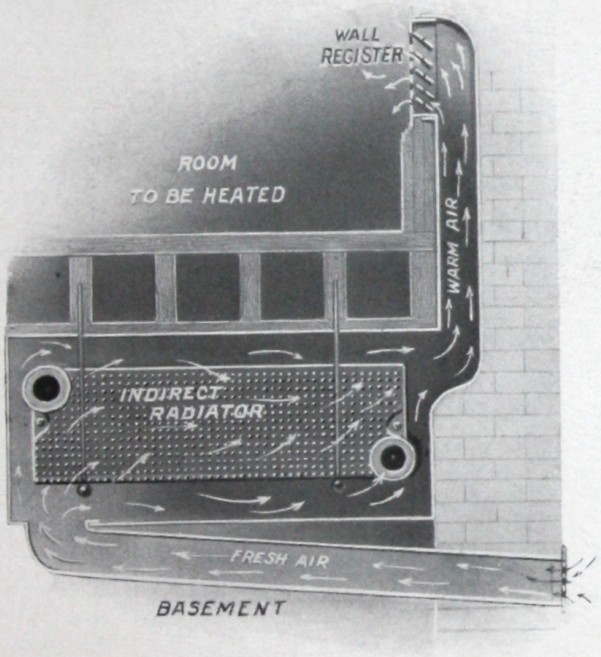
The *packless valve* is the latest refinement in valve making, and our "Philadelphia" Packless Valve is absolutely dependable. It entirely overcomes the leakage, and where used with vacuum heating installations, wonderfully increases the efficiency. Our valve also has the additional advantageous feature of quick opening and closing, as from wide open to tightly closed only requires a three-quarter turn of the handle. The cost is little more than the best type of packed valve, but it will save its cost in one heating season.

THIS VALVE CAN BE APPLIED TO EITHER NEW OR OLD SYSTEMS



THE FOERDERER LEATHER WORKS, FRANKFORD, PHILADELPHIA.

THE "PHILADELPHIA" INDIRECT METHOD OF HEATING



THIS means heating by indirect radiators, generally erected in stacks, in the basement, conveying fresh air from outside of building over the heated surface of the radiators (not showing in the room), and from thence up through sheet iron flues concealed in the walls, leading to the room to be heated, where fresh air is injected into the room through registers or grille-work. This system is more costly than the direct method, but has the advantage of supplying a constant volume of fresh heated air at the right temperatures, without burning out the life-giving oxygen in the air and throwing out sulphurous gas, attendant upon the average hot air furnace system.

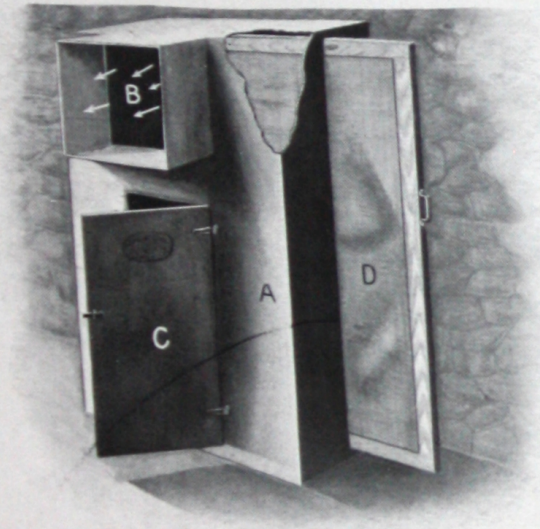
In our system, all flues and radiator casings are constructed of the best quality galvanized steel sheets of heavy gauge, neatly and tightly built.

The indirect method may be used with either Steam, Water, Vacuum, or Vapor systems of heating.

ENGLAND, WALTON & COMPANY, INC., LEATHER MANUFACTORY, THIRD AND VINE STREETS, PHILADELPHIA.
Mr. David Knickerbacker Boyd, Architect

THE "PHILADELPHIA" AIR FILTER

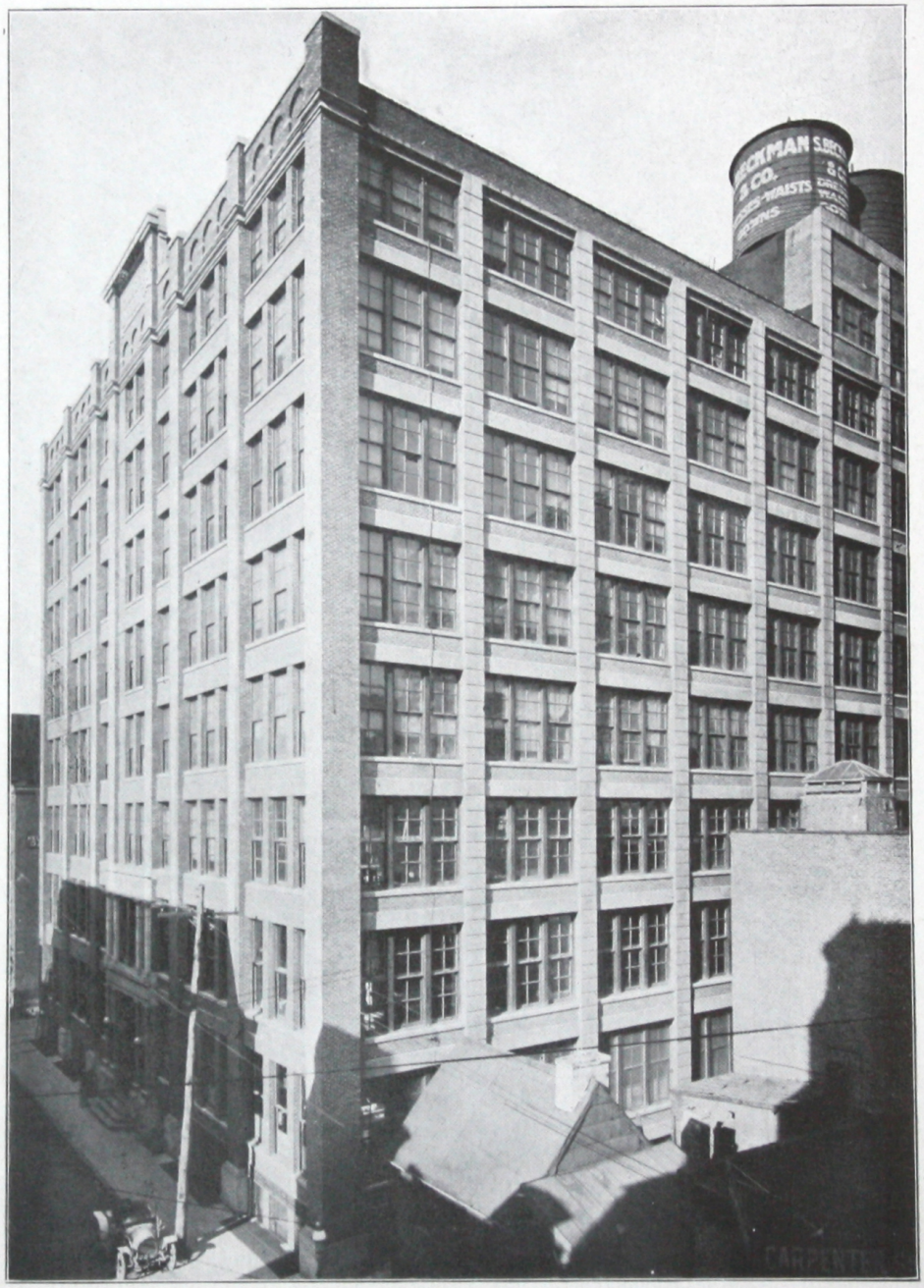
FOR CLEANING AIR ENTERING THE BUILDING THROUGH THE HEATING APPARATUS



PERHAPS you have noticed the dust that is carried into the house through the heat registers, where indirect heating is used. There is no doubt that the indirect method of heating is healthful, and in line with the theories advocated by our best medical experts, but the great difficulty has been to exclude the dust and the attendant microbes.

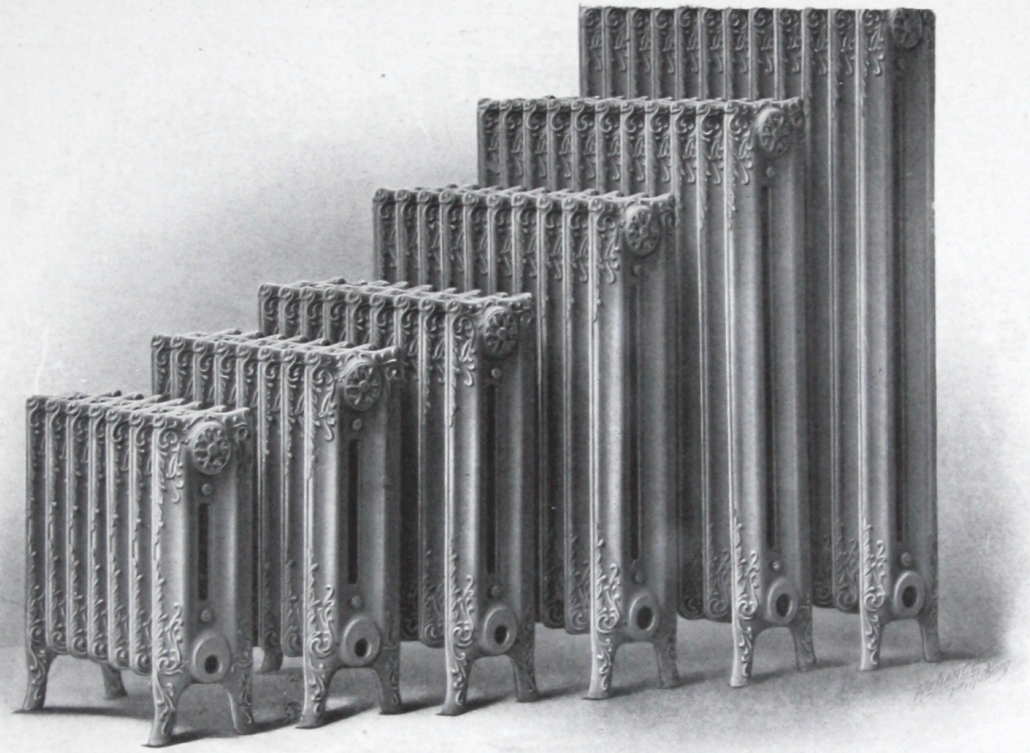
We have designed a filter for this purpose, and wherever used it has fully accomplished its purpose. Placed at the main air intakes, all incoming air is filtered before it enters the heating system, and the dust, dirt and likely accompaniments are effectually removed, and the air is delivered clean and pure into the house above.

FILTERS MAY BE APPLIED TO NEW OR OLD SYSTEMS
PRICES OF COMPLETE INSTALLATIONS FURNISHED UPON REQUEST



THE "GILBERT" LOFT BUILDING, JUNIPER AND CHERRY STREETS, PHILADELPHIA.
Mr. Charles Balderston, Architect.

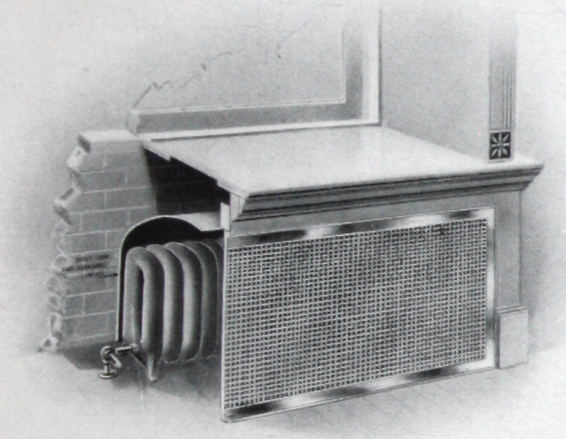
"PHILADELPHIA" DIRECT RADIATOR



WE manufacture a complete line of direct and indirect radiators, which may be built to suit any space in which it is intended to place them. Our direct radiators are furnished in ornamental or perfectly plain designs, and are smooth, perfect castings, susceptible to a perfect finish. They may be decorated with various colors in bronze or enamel, to harmonize with the finish of the apartments in which they are used. All our radiators are carefully tested at the factory and are guaranteed to be perfectly steam or water tight.

Paper Warehouse of A. Hartung & Company, Fifth and Cherry Streets, Philadelphia.
Mr. Carl P. Berger, Architect.

THE "PHILADELPHIA" METHOD OF CONCEALING DIRECT RADIATORS



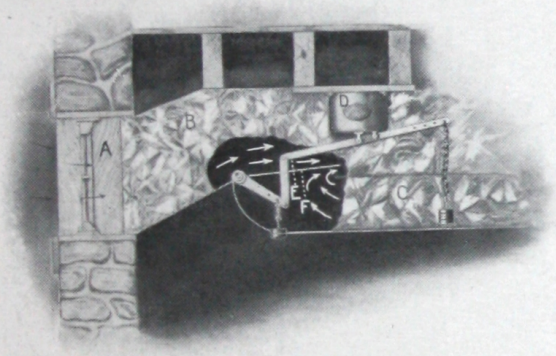
IF the appearance of radiators in a room is objectionable, we have perfected a means of concealing them in walls or under window seats, allowing the heat to escape through metal grilles, which may be finished to harmonize with the decorative scheme. The radiators and piping are thus effectively concealed, and yet the heating efficiency is not diminished.

Acme Tea Company's Bakery, Twenty-fifth and York Streets, Philadelphia.
Messrs. Ballinger & Perrot, Architects.

The Locomobile Company's Sales Building, Twenty-third and Market Streets, Philadelphia.
Messrs. Ballinger & Perrot, Architects.

THE "PHILADELPHIA" AUTOMATIC DAMPER

FOR FRESH AIR INTAKES



THE usual hand damper in the fresh air intake to an indirect heating system is the most neglected part of the apparatus. This neglect has caused more trouble and unnecessary expense than any other item in connection with a good, indirect heating system of which we know.

To overcome this, we originated the plan of automatically controlling the dampers by the temperature or pressure within the system. The air supply is correctly and automatically controlled at all times, without the slightest attention. It prevents waste of fuel, and insures a warm, comfortable house, day and night.

Our automatic device is very sensitive in operation, and capable of adjustment to suit any location or condition.

The cost is from $15.00 to $75.00 each, depending upon size of intake.

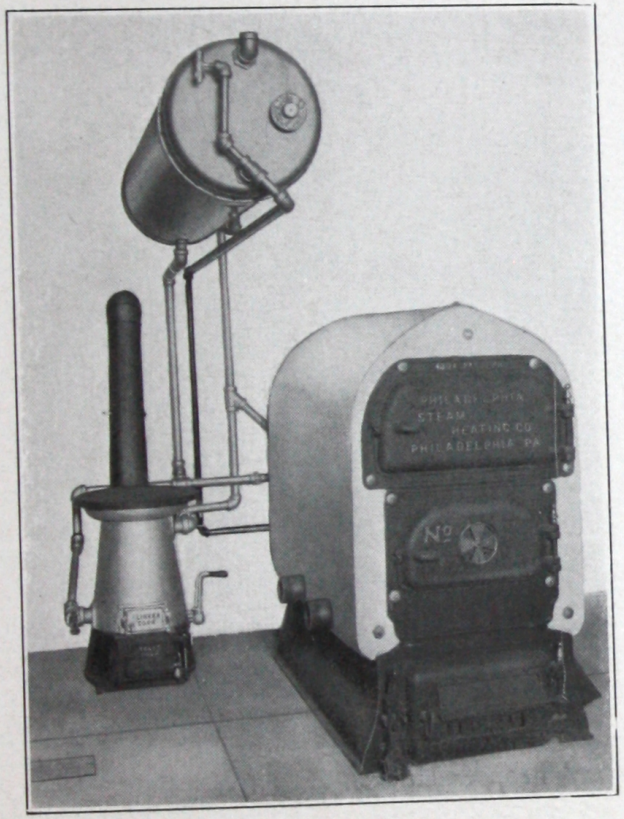
ACCURATE PRICES UPON APPLICATION

THE MUNGER & LONG STORES, CAMDEN, NEW JERSEY.
Mr. William Copeland Furber, Architect.

THE BERGDOLL MOTOR COMPANY'S BUILDING, SIXTEENTH AND CALLOWHILL STREETS, PHILADELPHIA.
Messrs. Watson & Huckel, Architects.

THE "PHILADELPHIA" WATER HEATER

HOT WATER IN ABUNDANCE—WITHOUT COST



CHIMERICAL as it may sound, yet it is true. All Winter long you can have abundance of hot water generated by your Steam, Water, Vapor or Vacuum house heater, *at no cost*, independent entirely of the kitchen range, if the "Philadelphia" Heating System is used.

The Winter cost of operation is absolutely nothing, as the same fire that warms the building heats the water.

The Summer cost is one-tenth that of gas, and the intense heat caused by generating hot water in the kitchen, or the immense waste of the instantaneous gas heater is entirely avoided.

The "Philadelphia" Water Heaters are made in capacities suitable for the smallest house to the largest hotel. The installation cost is small compared with the satisfactory results obtained—not even nearly touched by any other method.

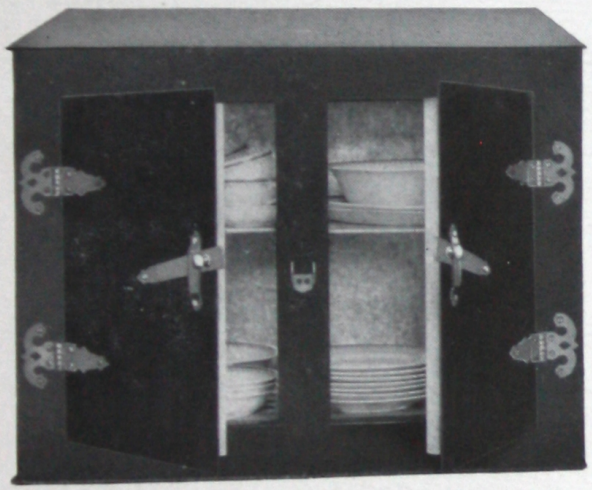
AUTOMATIC CONTROL FURNISHED AT SMALL ADDITIONAL COST

ESTIMATES, COSTS AND DATA FOR THE ASKING

Free Library of Philadelphia, Spring Garden Branch.
Mr. Milton B. Medary, Architect.

Free Library of Philadelphia, Frankford Branch.
Messrs. Watson & Huckel, Architects.

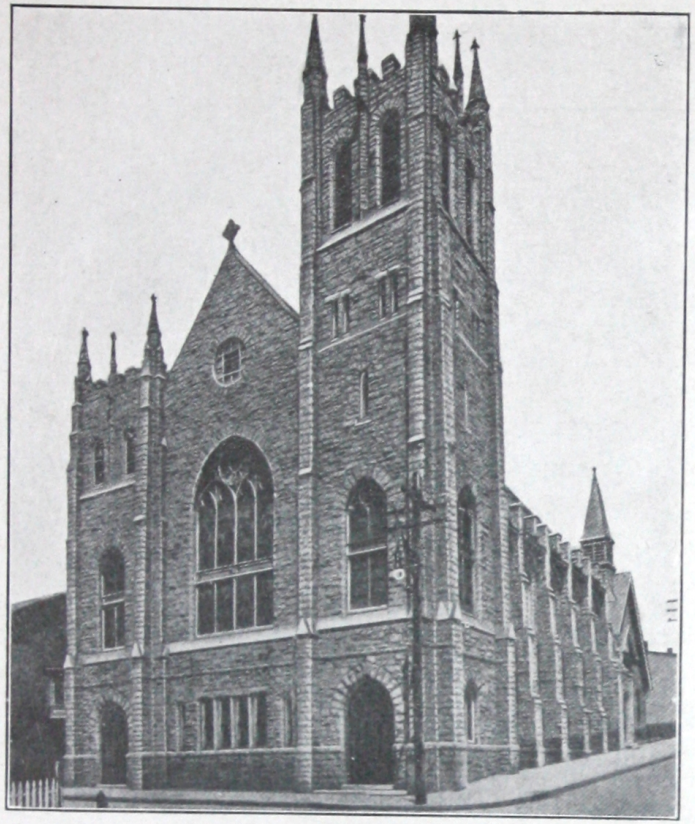
THE "PHILADELPHIA" PLATE WARMER OR HOT CLOSET



ONE of the greatest conveniences in the house equipped with an up-to-date Vacuum, Vapor, Steam, or Water heating apparatus is a Hot Closet. Anything may be kept piping hot, ready for service when required.

Instead of the little, narrow box usually furnished with the radiator which you commonly see, we construct our Hot Closet of generous dimensions—indeed the size is unlimited. They are made of either galvanized steel, Russia iron, or copper, as you may wish; nicely finished and provided with large doors, iron racks, etc., and unlike the standard closet, of any size to suit the space.

PRICES QUOTED UPON APPLICATION.

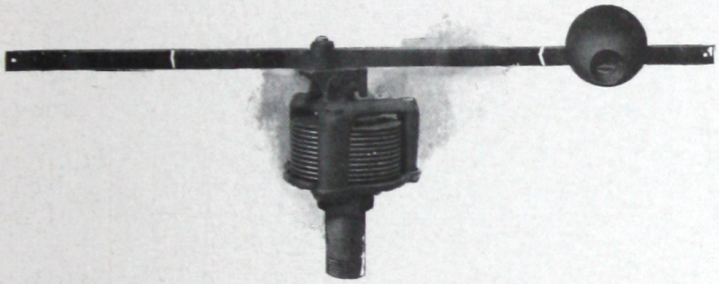


The Wissahickon M. E. Church, Roxborough, Philadelphia.
Messrs. Ballinger & Perrot, Architects.

Free Library of Philadelphia, Lehigh Branch.
Messrs. Hewitt, Stevens & Paiste, Architects.

THE "PHILADELPHIA" DAMPER REGULATOR

FOR STEAM, VACUUM OR VAPOR SYSTEMS



IT is composed entirely of metal; is frictionless; is sensitive to the last degree; is positive and invariable in its action, and will not deteriorate with age. The simplicity of its construction will be seen in the engraving.

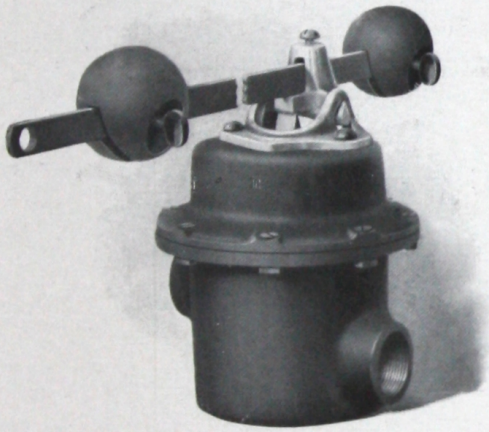
This device works just below atmospheric pressure, closing the dampers, if desired, before one ounce of steam pressure is generated. By shifting the counterpoise weight, one can change its application from below atmospheric pressure to any pressure desired, and maintain good draft control. These facts have been well established by means of a mercury column which records readings in half-ounces, and its extreme sensitiveness has been thereby thoroughly proven. The regulating arrangement is made upon the bellows plan, and is formed of two brass discs with accordion sides, made of steam brass of the best quality. The accordion sides are made of ten deep folds which permit of ample yet very sensitive expansive effect upon the vertical rod that connects the top of the bellows to the bar upon which the counterbalance weight is placed. The sides are not built up of separate discs, but are formed from a continuous piece of solid brass, so that there are no joints or seams to come loose of cause breakage. It will last as long as the boiler.

FRIENDS' RACE STREET MEETING HOUSE, FIFTEENTH AND RACE STREETS, PHILADELPHIA.

SCHOOL BUILDING AT WASHINGTON, D. C.

THE "PHILADELPHIA" DAMPER REGULATOR

FOR WATER BOILERS AND TANK HEATERS



GRADED to accommodate the various ranges of temperature used in water-heating apparatus; are simple, durable and reliable. They minutely adjust the dampers of Boiler or Tank Heaters at the slightest variation of water temperature.

Contain no perishable diaphragms, piston cylinders, packings, valves, or sliding joints. Are absolutely self-contained and require no auxiliary power, such as electricity or compressed air, to aid their operation.

Counterpoise weights may be set to accurately maintain any degree of water temperature desired. Overheating is avoided, uniform warmth is insured to the rooms, fuel is saved, and care of operating boiler reduced to lowest point.

No. 2 Regulator, for water temperatures from 120 to 180 degrees.
No. 3 Regulator, for water temperatures from 160 to 220 degrees.
No. 4 Regulator, for water temperatures from 190 to 240 degrees.

PRICES, INSTALLED COMPLETE, UPON REQUEST

St. Agatha's Church, Rectory and Parish School, Philadelphia.
Heated from a Central Plant.

THE REGITHERM HEAT REGULATOR

FOR HOT AIR, STEAM AND HOT WATER HEATERS, OR CENTRAL STATION HEATING.

THE Regitherm is a new automatic temperature regulator which operates in response to the slightest change in temperature. It requires no outside agencies, such as electricity, compressed air, etc., to help it perform its functions, but exerts sufficient force within itself to adjust the heating apparatus, either increasing or decreasing the supply of heat. Its range of control is from 60 to 80 deg. Fahr., and it can be set, and will keep the temperature at any desired point within these limits.

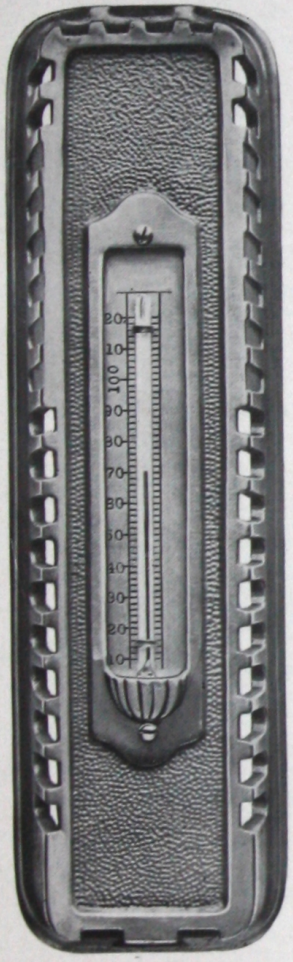
The Regitherm is particularly adapted to stores, churches, dwellings, and all buildings in which one uniform temperature must be maintained. One of its principal advantages is found in its capacity to keep an even temperature during the night, insuring reliable comfort, and preventing the fire from "burning out" in windy weather.

The construction and operation are simple, being based on the same principles that govern a thermometer—*i. e.*, the action of heat and cold on a volatile chemical. In the Regitherm is a metal bellows, capable of expanding and contracting like a telescope. Within this bellows is sealed, air-tight, a small amount of volatile liquid. The slightest variation in temperature changes the form of the liquid (expanding by vaporizing, contracting by condensation), hence changes the outward pressure exerted by it. So sensitive, yet so powerful, is this liquid, that a change of one degree in the room temperature will change its pressure at the rate of about one-half pound per square inch, yet in spite of this unusual and constant action, the liquid serves effectively for a lifetime.

Size of instrument (not including mounting board) 10 inches wide, 8 inches high, 6 inches deep. Shipping weight 50 pounds.

PRICES UPON APPLICATION

THE BUILDINGS OF THE PHILADELPHIA HOME FOR INCURABLES, FORTY-EIGHTH AND WOODLAND AVENUE.
Heated from a Central Plant.



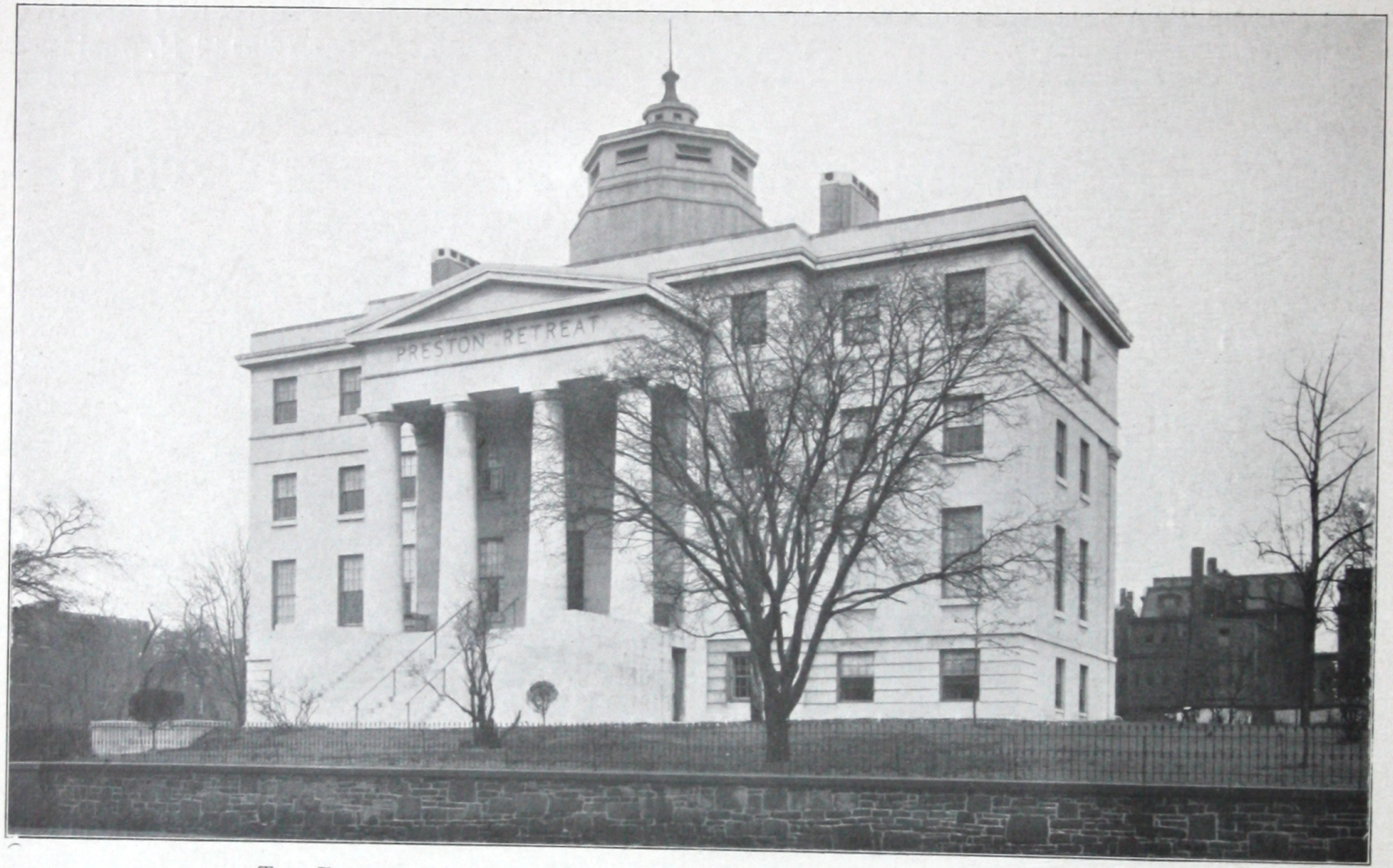
INDIVIDUAL TEMPERATURE REGULATION FOR EACH APARTMENT

POSSIBLY the highest refinement in heating apparatus calls for a means of perfectly controlling the temperatures in the building. There has recently been perfected an automatic temperature controlling apparatus, so sensitive that it will control the temperature of each room within one-half of one degree in rise or fall. This apparatus consists of a thermostat, which is a little device four or five inches high, placed in each apartment in which the temperature is to be controlled. It operates through a system of concealed pneumatic tubing directly on the radiator valve, or upon the damper in the heat flue, turning on the heat when the temperature falls one-half degree below the predetermined point, or closing off the heat when it rises one-half degree above the point desired.

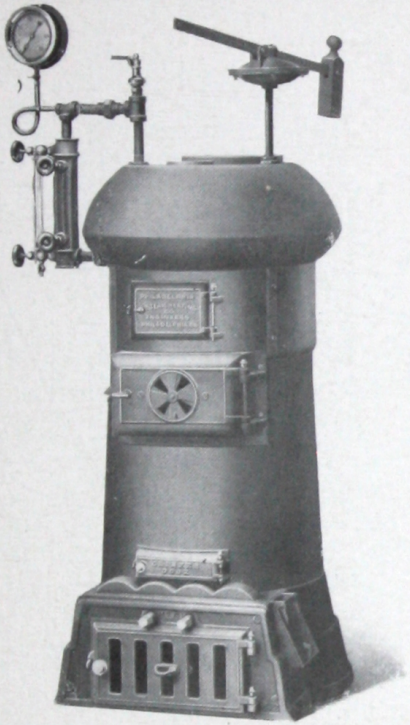
It is obvious that if the room temperature is kept at a mean point during the entire day or night, it results not only in a much more healthfully heated house, but is an immense fuel saver, and the inaccuracies of manual control are entirely avoided.

It is simple in operation, and can be set by the room occupant at any desired temperature, accurately regulating the amount of heat in each separate room or apartment, entirely independent of each other.

INSTALLATION PRICES QUOTED UPON APPLICATION



THE PRESTON RETREAT, TWENTIETH AND HAMILTON STREETS, PHILADELPHIA.
Mr. Edgar V. Seeler, Architect.



ILLUSTRATING EXTERIOR VIEW

OF 16-INCH, 18-INCH AND
21-INCH ROUND SERIES

"PHILADELPHIA" WATER HEATERS

CAPACITIES

300 TO 1,000 SQUARE FEET

THE "PHILADELPHIA"
12-INCH AND 16-INCH
SECTIONAL HEATER

CAPACITIES

STEAM, 100 TO 1,000 SQUARE FEET
WATER, 250 TO 1,500 SQUARE FEET

THE WIDENER MEMORIAL TRAINING SCHOOL FOR CRIPPLED CHILDREN, PHILADELPHIA.
Mr. Horace Trumbauer, Architect.

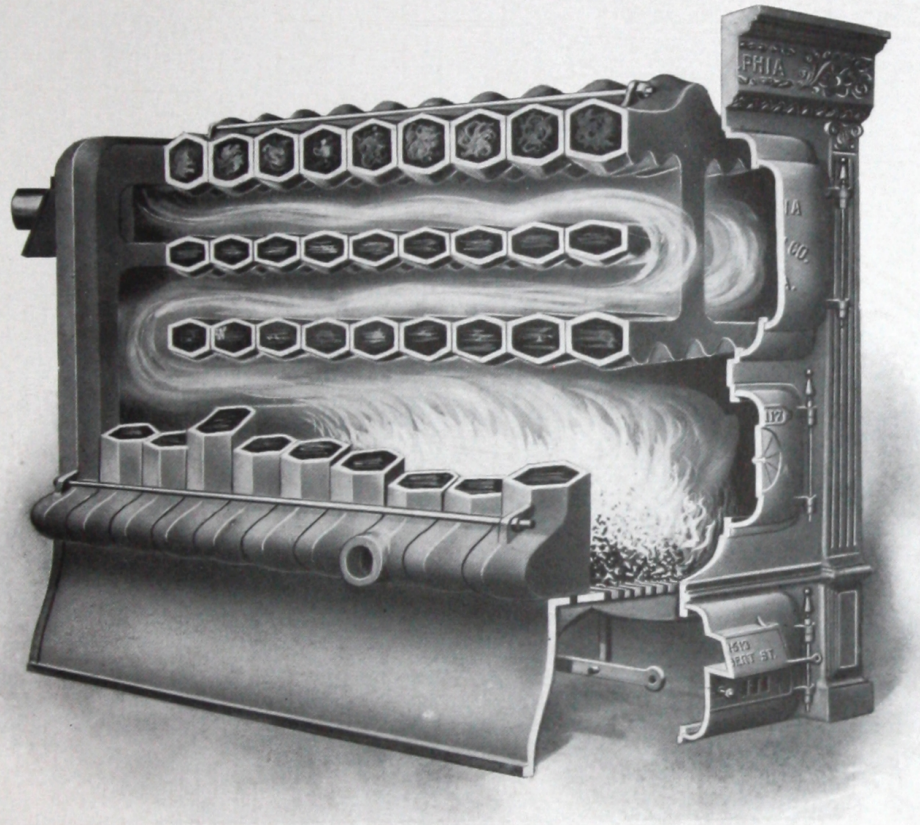
THE 20-INCH SECTIONAL "PHILADELPHIA" HEATER

CAPACITIES

STEAM, 600 TO 1,200 SQUARE FEET
WATER, 900 TO 1,600 SQUARE FEET

THE CROZER HOME FOR INCURABLES, UPLAND, DELAWARE COUNTY, PENNSYLVANIA.
Messrs. Seymour & Paul A. Davis, Architects.

THE RUSH HOSPITAL, PHILADELPHIA.
Messrs. Brockie & Hastings, Architects.



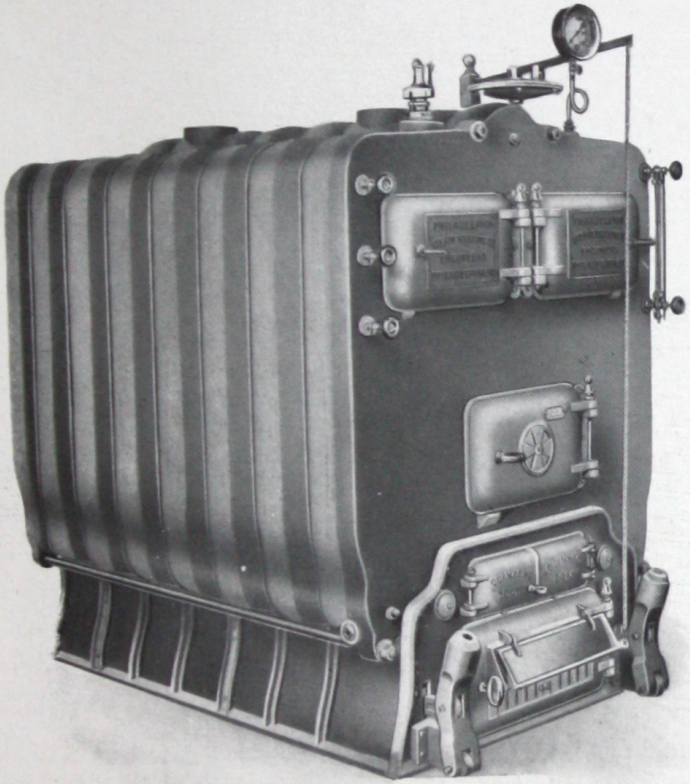
CUTAWAY VIEW OF 24-INCH "PHILADELPHIA" HEATER

STEAM CAPACITY 1,000 TO 1,700 SQUARE FEET
WATER CAPACITY 1,600 TO 2,500 SQUARE FEET

THE fire travel shown in the above cut is one of the distinctive features of all the "Philadelphia" Heaters. The flues arranged in tiers, one over the other, afford a long gas travel, preventing the enormous waste of heat in the chimney, prevalent with so many other makes.

The Philadelphia Cricket Club, Saint Martins, Philadelphia.
Mr. George T. Pearson, Architect.

THE 33-INCH SERIES "PHILADELPHIA" SECTIONAL HEATER

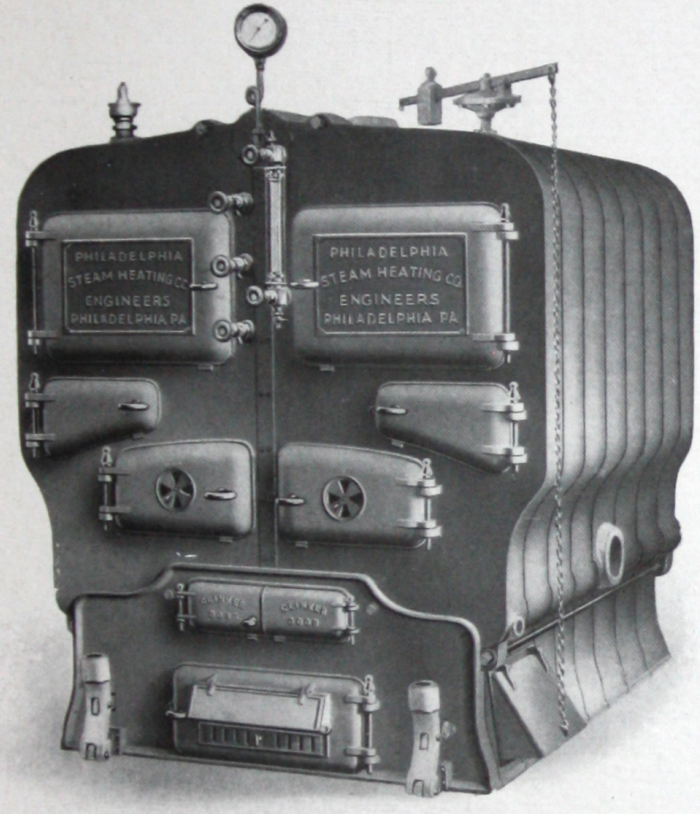


STEAM CAPACITY 1,700 TO 4,500 SQ. FT.
WATER CAPACITY 2,600 TO 7,000 SQ. FT.

ALL of the "Philadelphia" Heaters are built with the "Push" Nipple, which is acknowledged to be the ideal joint for connecting boiler sections. Heavy push nipples of non-oxydizing material are used entirely, obviating the frequent repairs usual in the "manifold" and "packed joint" types of boilers. The sections are interchangeable, and are easily removed for adding sections for boiler enlargements, etc., if necessary to increase size of building. The push nipple construction gives a single unit boiler, with through waterways, which provides the quickest circulation, and allows for expansive movement in sudden strains, due to temperature changes, avoiding the breakage so common in other types of heaters.

The Keystone Theatre, Eleventh and Lehigh Avenue, Philadelphia.
Mr. Albert E. Westover, Architect.

The William Penn Theatre, West Philadelphia.
Mr. Carl P. Berger, Architect.



EXTERIOR VIEW OF 50-INCH SERIES "PHILADELPHIA" HEATER FOR STEAM OR WATER

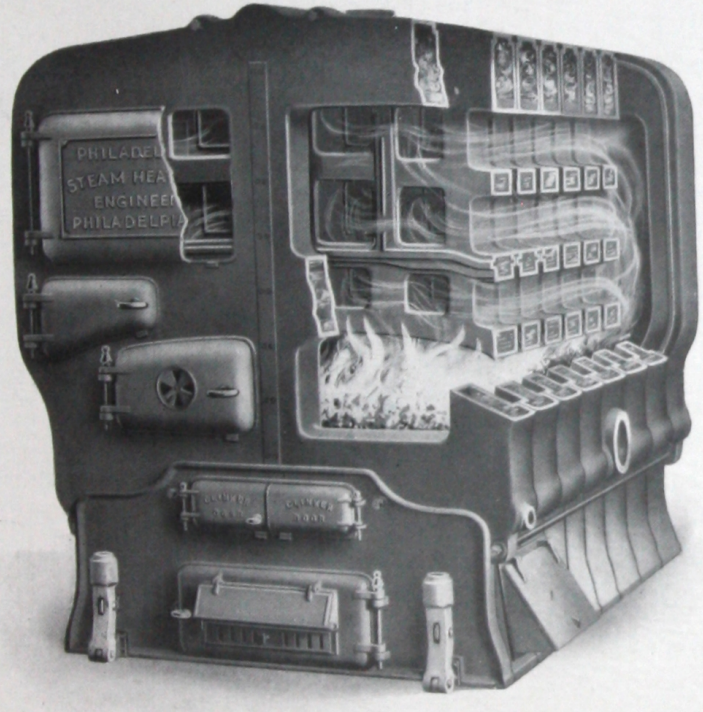
STEAM CAPACITIES 4,000 TO 9,500 SQ. FT.

THE "Philadelphia" Heater Grates are the rocking and dumping pattern, easy to agitate, and are made of heavy, clean castings, all bars being interchangeable. In the larger boilers the grates are divided into front and back halves, so that part of the fire only may be maintained for mild weather heating.

The United States Appraisers' Warehouse at Port of Philadelphia.

Pier Building for Baltimore and Ohio Railroad Company, 22 South Wharves.

VIEW SHOWING FIRE TRAVEL IN 50-INCH SERIES "PHILADELPHIA" HEATER FOR STEAM OR WATER



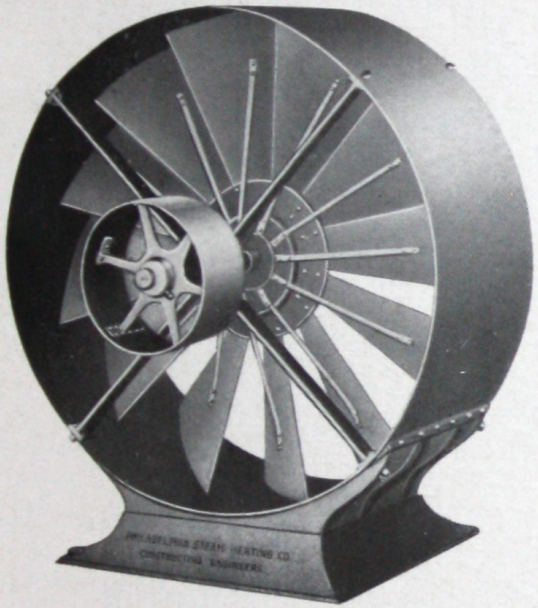
Water capacities from 7,000 to 16,000 sq. ft. The equipment of each "Philadelphia" Heater includes—

Graduated Hand Damper,
Gauges,
Water Column,
Water Gauges and Glass,
Hoe and Poker,
Automatic Damper Regulator for Steam Heaters,
Altitude Gauge and Hydro-Thermometer for Water Heaters.

Cored outlets are provided in all heaters for inserting waterback coil for generating hot water for bathrooms, laundries, or other domestic purposes.

THE ACADEMY OF THE NEW CHURCH, BRYN ATHYN, PENNSYLVANIA.
Heated from a Central Plant.
Mr. Henry L. Reinhold, Jr., Architect.

THE "PHILADELPHIA" VENTILATING APPARATUS



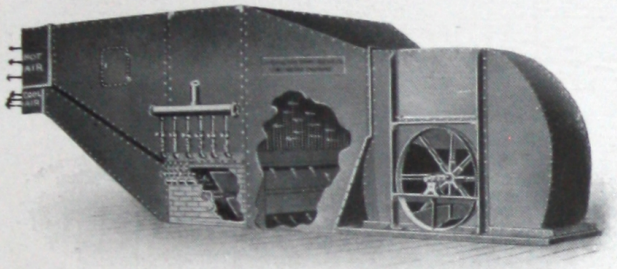
SPECIAL ventilation is often required in buildings, in which the quick removal of vitiated air is imperative. For this purpose our disc vent fans, operated by small electric motors or belt-driven from other motive power, are unsurpassed. As we construct our own sheet metal work, we will figure upon the complete installation of ventilating systems. The systems are applicable where the quick removal of dust, smoke, acid fumes, gases, or foul air, etc., is required.

A small apparatus of this type is especially valuable for ventilating kitchens, smoking rooms, etc., by removing the air quickly, and discharging it outside the building.

INSTALLATION PRICES UPON REQUEST

"Tredinnock," at Elkins Park, Pennsylvania.
Mr. Lawrence Visscher Boyd, Architect.

THE FAN METHOD OF HEATING AND VENTILATING

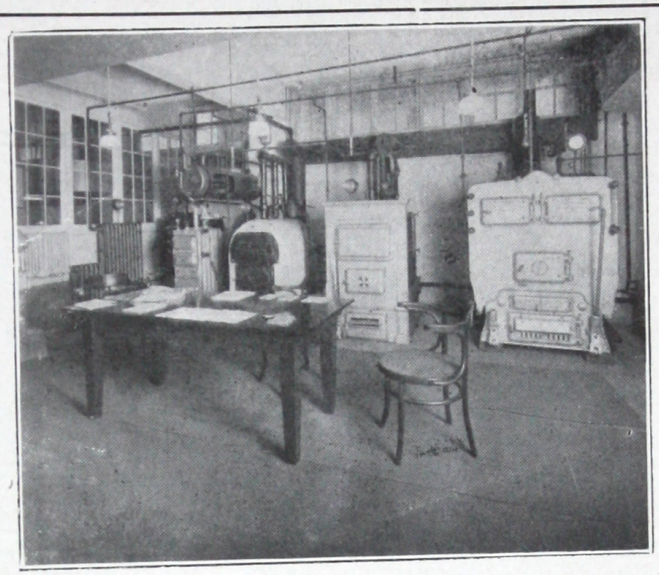


BY which the fresh air is taken from outside the building, conveyed over steam-heated surfaces and forced by blast fans through sheet-iron ducts and flues into the room to be heated. Usually similar blast fans, ducts and flues are used to exhaust the vitiated air from the rooms at the same time, thus changing the air in the rooms many times per hour. This system is called the Fan System of Heating and Ventilating. Provision can be made to automatically humidify the air to maintain the proper amount of moisture, to automatically control the temperature by a thermostatic apparatus, and to separate the dust from the air by a washing device.

The Fan System is adapted to Schools, Banking Houses, Office Buildings, Theatres, Hospitals, Factories, or any building in which there is a large and frequent assemblage, and where it is desirable to change the air quickly without perceptible draft, and at the same time maintain a comfortable temperature. Properly constructed, it is the most expensive method to install, but is now considered indispensable in many up-to-date buildings of public nature.

Residence of Rt. Rev. Alexander Mackay-Smith,
Philadelphia.
Mr. Theopilus P. Chandler, Architect.

"Cheswold." The Residence of Mrs. Alexander J. Cassatt,
Haverford, Pennsylvania.
Messrs. Furness, Evans & Company, Architects.



DEMONSTRATING ROOM

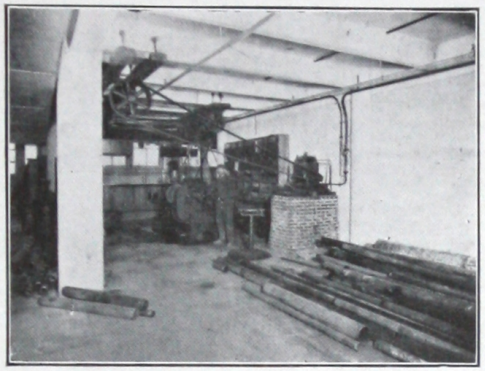
OUR demonstrating room is at your service for the purpose of exhibiting our specialties and explaining the various functions of the perfected heating apparatus.

YOU ARE CORDIALLY INVITED TO INSPECT OUR APPARATUS

The combined knowledge gained in 40 years' business by our Engineering and Construction Departments, plus the high-grade apparatus which we manufacture, insure our clients the very highest class apparatus procurable. While we cannot compete in price with many of the cheaper grades of materials and workmanship, in the market, our work demonstrates conclusively that its increased value is worth many times the difference to you.

"Nawbeek." The Residence of Mr. Alexander Brown Coxe, at Paoli, Pennsylvania.

The Residence of Mr. Wm. Wayne and the Birthplace and Home of General Anthony Wayne, at Paoli, Pennsylvania.



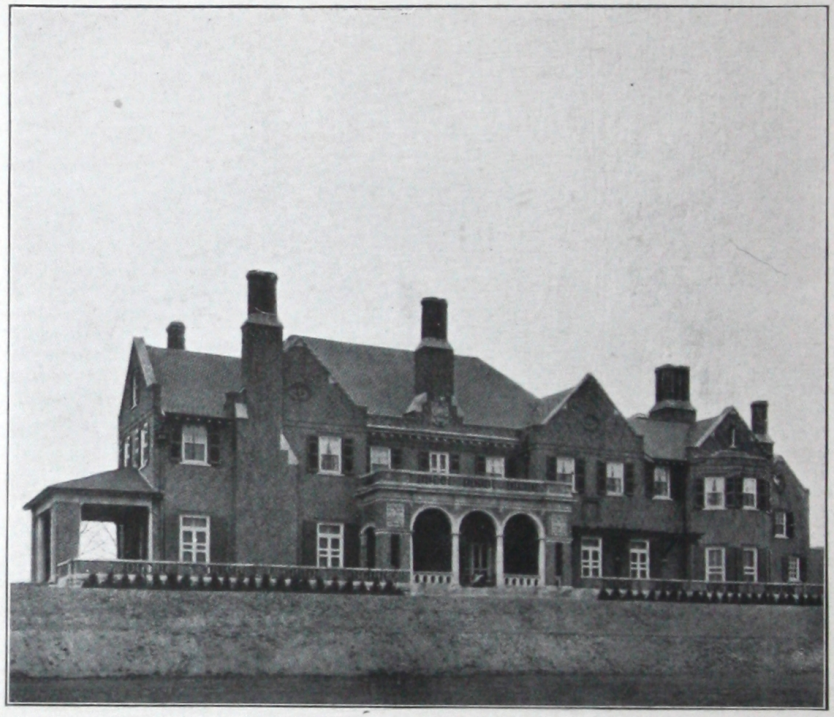
REPAIR DEPARTMENT

WE carry in our warehouses an immense stock of various supplies for replace parts of all apparatus of our own manufacture, as well as other standard makes. Besides, we employ some one hundred skilled mechanics in this department alone, which insures our customers immediate service. You will not be obliged to wait indefinitely for castings for an apparatus made a thousand miles away from home. We especially solicit the business of those who have failed to obtain satisfactory service elsewhere. No matter how large or small your order, it will have the same prompt, efficient attention.

EIGHT TELEPHONE TRUNKS

CENTRAL LOCATION—HALF WAY BETWEEN THE PENNSYLVANIA AND READING STATIONS—MAKE IMMEDIATE SERVICE EASY

"Ballyheather," the Residence of Mr. James McCrea, at Ardmore, Pennsylvania.
Messrs. Baily and Bassett, Architects.



"Glencoe," the Residence of Mr. Thomas McKean, at Rosemont, Pennsylvania.
Mr. George Bispham Page, Architect.

REFERENCES SELECTED FROM OVER EIGHT THOUSAND PLANTS INSTALLED IN FORTY YEARS BUSINESS

PUBLIC BUILDINGS

U. S. Treasury Bldg., Washington
Industrial School of the District of Columbia, Washington
Soldiers' Home Buildings, Baltimore
Postal Pneumatic Transit Co., P. R. R. Broad Street Station
Army Post Buildings, Fort Myer, Va.
Phila. Almshouse and Hospital
Girard College Buildings
U. S. Appraisers' Stores, Philadelphia
Philadelphia Museums
Carnegie Library, Frankford
Carnegie Library, Sixth and Lehigh
Carnegie Library, Seventeenth and Spring Garden
New Post Office Dep't Bldg. Wash'n
Asylum for the Insane, Washington
U. S. Jail Dep't of Justice, Washington
House of Refuge Bldgs., Baltimore
New Free Public Library, Newark, N. J.
Frankford Arsenal Buildings
Municipal Disinfecting Plant, Phila.
Soldiers' and Sailors' Home, Erie
24 Army Post Bldgs., Fort Hancock, N. J
U. S. Sub-Post Office Bldgs., Philadelphia (9 stations)
U. S. Post Office Bldg., Chester
U. S. Post Office Bldg., Allentown

THEATRES

Keith's Chestnut Street Theatre
Walnut Street Theatre
Mishler's New Theatre, Altoona
Park Theatre
New State Street Theatre, Trenton
Broad Street Theatre
Chestnut Street Theatre
Temple Theatre, Camden
Gilmore's Auditorium
Liberty Theatre
Keystone Theatre
William Penn Theatre
Keith's Theatre, Portland, Maine

THE RESIDENCE OF MR. JOHN B. THAYER AT HAVERFORD, PENNSYLVANIA.
Mr. David Knickerbacker Boyd, Architect.

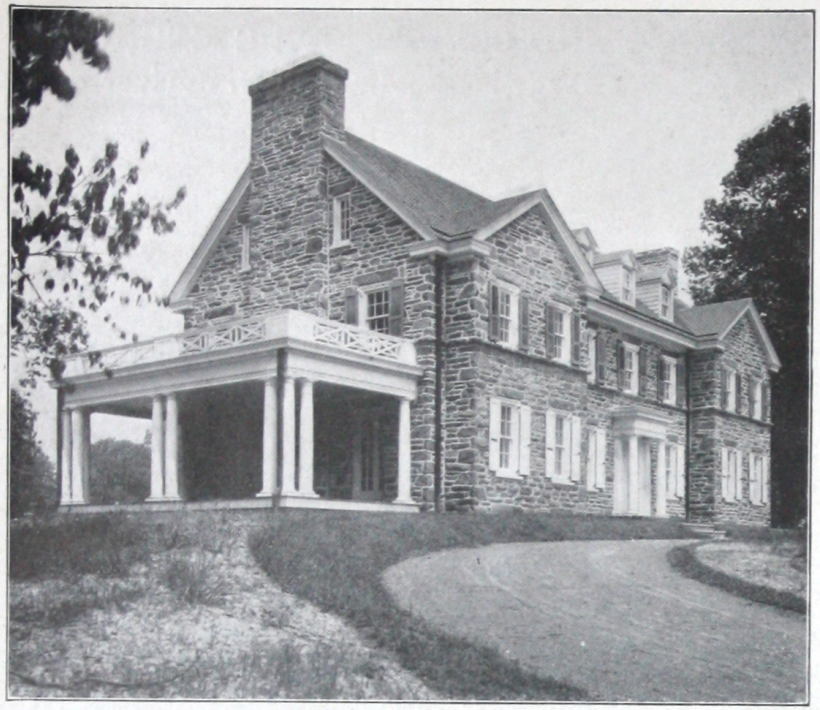
THE RESIDENCE OF MR. WILLIAM WEST, ARDMORE, PENNSYLVANIA.
Mr. George Bispham Page, Architect.

CLUBS

Spring Haven Country Club, Wallingford
Rittenhouse Club
Hamilton Club
Overbrook Golf Club
Penn Charter Club, Germantown
Art Club, Philadelphia
Manufacturers' Club
Belmont Cricket Club
Philadelphia Cricket Club
Young Friends' Association

BANKS, MERCANTILE BUILDINGS, HOTELS, ETC.

Real Estate Title and Trust Co.
Pennsylvania R. R. Arcade Building
Geo. B. Wilson, 2 Mercantile Bldgs.
Merchants' House
Humphrey & Martin
Sailer & Stevenson
Colonnade Hotel
Keystone Telephone Co. (7 Bldgs.)
Munger & Long's Dept. Store, Camden
Parkside Apartment House
Fidelity Trust Company
E. W. Clark & Co., Banking House
Colonial Trust Co., 13th and Market
Union National Bank, Wilmington
East Broadtop R. R. Station, Orbisonia, Pa.
Philadelphia National Bank
Sydney L. Wright, Office Building
Sharpless Building
Franklin Office Building
Office Building, 931 Chestnut Street
Central Trust Company Building
Geo. B. Davis & Co.
Blasius & Son's Building
Hotel Flanders
Brighton Hotel, Atlantic City
Haddon Hall, Atlantic City
Cresheim Arms
Hotel Stenton
Bryn Mawr College Buildings
Lloyd Garrett Co.
Robt. M. Coyle, Office Buildings
Federal Trust Company
Penna. R. R. Offices
Penna. R. R. Water Supply System
Penna. R. R. West Philadelphia Yards
W. Frederick Snyder, Office Building
Federal Trust Company
Portland Savings Bank, Portland, Me.
Insurance Company of North America
Tacony Trust Company
Peoples Trust Company of Philadelphia
Philadelphia Trust, Safe Deposit and Insurance Company
Western Savings Fund Society
Columbia Avenue Trust Company
Pennsylvania Fire Insurance Company
Fidelity and Casualty Company
Integrity Title Insurance, Trust and Safe Deposit Company
Parkway Building
McClees Galleries
Estate of Dr. David Jayne
Chas. J. Webb and Company
Abbott's Alderney Dairies
Merchants Warehouse Company
Estate of Henry Tilge
Mitchell, Fletcher and Company
Bryn Mawr Hotel
Frank H. Stewart Electric Company
Baltimore and Ohio Railroad Company's Offices
Fire Association of Philadelphia



THE RESIDENCE OF MR. JAMES K. CLARK.
Messrs. McIlvain and Roberts, Architects.

THE RESIDENCE OF MR. BURROWS SLOAN.
Messrs. McIlvain and Roberts, Architects.

MANUFACTURING BUILDINGS

G. A. Bisler Company
Dungan, Hood & Co.
Munyon Laboratories
Thomson Printing Company
O'Neill Bros., Inc.
Crompton Knowles Loom Works
Armure Tapestry Mills
Lippincott Bldg., 4th and Arch
Oxford Mills Company
Welsbach Company
Penna. Auto-Motor Company
Locomobile Company of America
Quaker City Dye Works
Frank P. Heid & Co.

Remington & Sherman Co.
Best Kid Company
Building for Henry Carey Lea
F. Laurent & Son
John J. Hood Building, 610 Market
R. H. Foerderer, Inc., Frankford
R. H. Foerderer, Inc., Bridesburg
National Drug Company
Dill & Collins Company, Warehouse
Otis Elevator Company
England, Walton & Co., Inc.
Forty-four Cigar Company's Factory
Gilbert Building
Fahnestock Building

Griswold Worsted Company
A. G. Spalding & Bros.
Hero Manufacturing Company
Cunningham Piano Company
Endura Manufacturing Company
Janney & Burrough
Philadelphia Leather Works
Midvale Steel Company
Leatherfood Company's Mill
Acme Tea Company's Bakery
George W. Garrett & Sons
Ingersoll-Trenton Watch Company
A. H. & F. H. Lippincott, Inc.
A. Hartung Company

HOMES

Home for Deaf Children, Bala, Pa.
Baptist Orphanage, Angora, Pa.
Home for Destitute Colored Children
Masonic Home of Pennsylvania
Southern Home for Destitute Children
Old Man's Home
Crozer Home for Incurables

Western Home for Poor Children
Penna. Ind. Home for Blind Women
Home for Crippled Children (6 Bldgs.)
Home for Orphans of Odd Fellows
Church Home for Children
Baptist Home
St. Francis Industrial Home for Boys

Home for Incurables
Home of the Merciful Saviour for Crippled Children
Shelter for Colored Orphans
Presbyterian Home for Aged Couples
Home for Orphans of Odd Fellows of Pennsylvania (New Germantown Bldg.)

CHAPTER HOUSE, UNIVERSITY OF PENNSYLVANIA.
Messrs. Thomas, Churchman and Molitor, Architects.

THE RESIDENCE OF MR. GEORGE C. BLABON,
MERION, PENNSYLVANIA.

HOSPITALS

Hahnemann Hospital
St. Christopher's Hospital
Pennsylvania Hospital for Insane
West Phila. Hospital for Women
Women's Medical College
Penna. Hospital (2 Buildings)
Preston Retreat
Children's Hospital
Medico-Chirurgical Hospital
Orthopædic Hospital
Germantown Hospital
Presbyterian Hospital
Mt. Sinai Hospital
Episcopal Hospital
Rush Hospital

SCHOOLS

Divinity School of the P. E. Church
Wm. Penn Charter School
Cedarville Public School
Park Avenue School
School of Practice
Manayunk School
Robert Morris School
Vaughn School
Chestnut Hill Academy
Northeast Grammar School
St. Francis' Industrial School
Congregation of Rodeph Shalom
Ridley Park Public School
Industrial Home School, Washington
Levering School, Manayunk
McDaniel School
Whitehall School
Baugh School
Truant School
La Salle College
University of Pennsylvania
Friends' Central School
Millville Public School
St. Thomas R. C. School
Parochial School, Church of the Epiphany
Glenwood School
Boker School
Bordentown Military Institute
Wm. J. Miller School
Alexander Adair School
Episcopal Academy
Friends' School, Germantown
New Church School Buildings
Kennett Square Public School
Western High School, Washington
Thad. Stevens School
Manual Training School
A. D. Bache School
St. Agatha's R. C. School
Newton School
St. Vincent's Parochial School
Academy of the New Church, Bryn Athyn, Pa., Central Heating Plant (7 Bldgs.)
Cheltenham High School
Widener Memorial Training School for Crippled Children

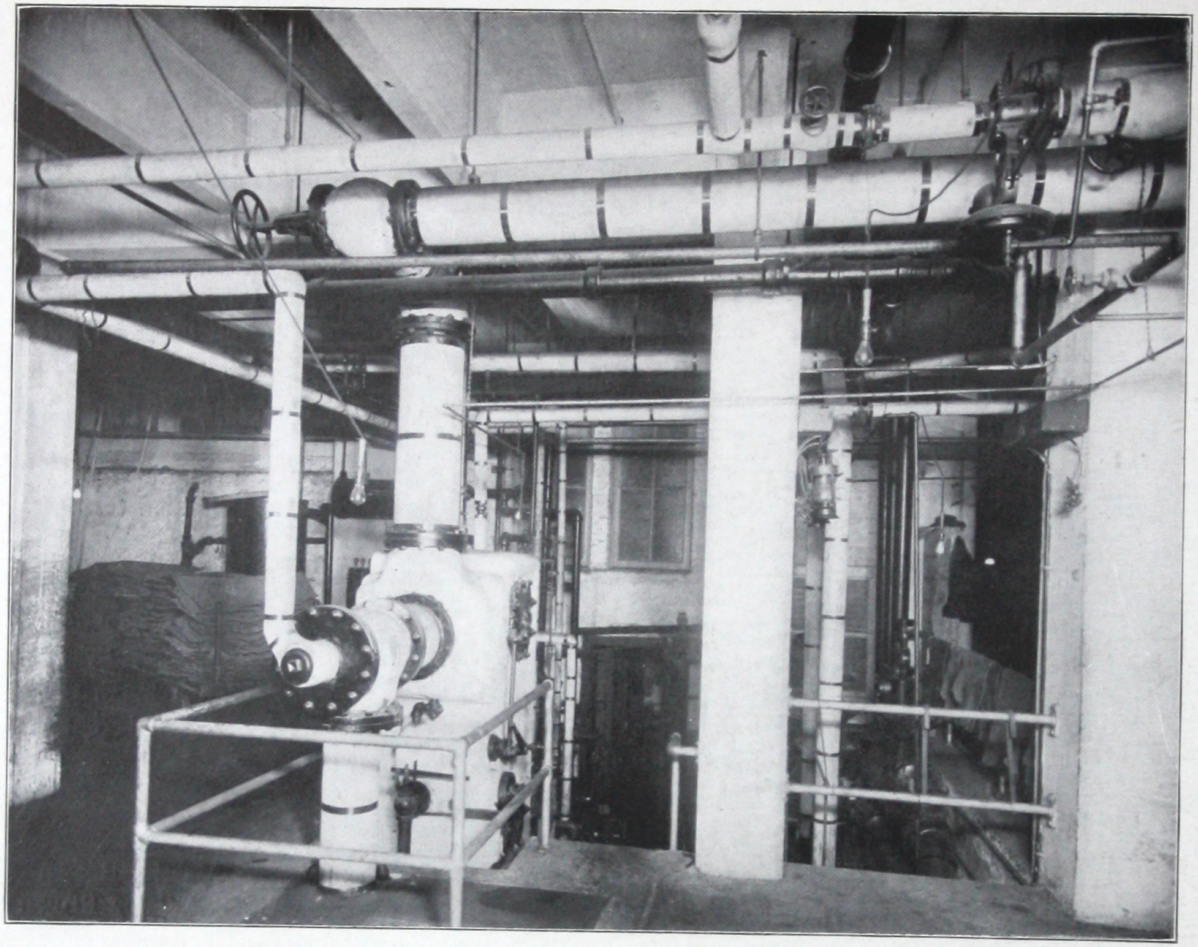
FREE LIBRARY OF NEWARK, NEW JERSEY.
Messrs. Rankin & Kellogg, Architects.

CHURCHES

Bethany Presbyterian Church
Frankford M. E. Church
Central M. E. Church
R. C. Church of the Annunciation
St. Agatha's R. C. Church
Abington Presbyterian Church
Zion Baptist Church
Olivet Presbyterian Church
St. Francis de Sales Church
St. John's Lutheran Church, Easton
Universalist Church of the Restoration
Third Baptist Church
Great Valley Presbyterian Church, Paoli
Fourth Presbyterian Church
Fourth Reformed Church
Frankford Presbyterian Church
Mt. Airy Presbyterian Church
Grace P. E. Church
St. Martin's Church of the Evangelists
Park Ave. M. E. Church
Oxford Presbyterian Church
Messiah Lutheran Church
Covenant M. E. Church
Temple Presbyterian Church
St. Paul's P. E. Church, Baltimore
Manayunk Baptist Church
St. Matthew's Lutheran Church
St. Thomas R. C. Church
Susquehanna Ave. Presbyterian Church
Universalist Church of the Messiah
Union M. E. Church
P. E. Church of the Incarnation
Union Tabernacle Presbyterian Church
Calvary M. E. Church
Patterson Memorial Church
Bryn Mawr Presbyterian Church
Wissahickon M. E. Church
St. Martin's-in-the-Fields
Jay Cooke Memorial Chapel
West York M. E. Church
St. Ignatius R. C. Church
St. John's Reformed Church, Riegelsville, Pa.
Church of the Good Shepherd, Rosemont, Pa.
All Hallows P. E. Church, Wyncote
Friends' Race St. Meeting, Philadelphia
Mt. Airy Presbyterian Church
Church of Our Saviour, Jenkintown, Pa.
M. E. Church of the Advocate
St. Michael's and Zion Lutheran Church
St. Stephen's P. E. Church
Princeton Presbyterian Church
Northminster Presbyterian Church
St. Paul's P. E. Church, Ogontz
First Presbyterian Church

RESIDENCES

Mr. Chas. B. Adamson
Mr. Samuel Allen
Mrs. Matthew Baird
Mr. Geo. E. Bartol
Mr. Daniel Baugh
Mr. W. P. Bement
Mr. Geo. C. Blabon
Mr. Beauveau Borie
Mr. Jas. C. Brooks
Mr. Wm. Findlay Brown
Miss Martha Brown
Mr. T. Wister Brown
Mr. Geo. Burnham
Mr. C. C. Butterworth
Mr. H. K. Caner



PUMP ROOM, ENGLAND, WALTON & CO., INC., THIRD AND VINE STREETS, PHILADELPHIA.

RESIDENCES—Continued

Mr. Wm. T. Carter
Dr. C. Shirley Carter
Mr. A. J. Cassatt
Mr. T. P. Chandler
Mrs. M. J. B. Chew
Mr. E. W. Clark
Mr. Percy H. Clark
Mr. Clarkson Clothier
Mr. H. H. Collins
Mr. S. W. Colton, Jr.
Mr. John H. Converse
Mr. John W. Converse
Mr. Charles E. Coxe
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